ABSTRACT OF THE DISCLOSURE

Disclosed is a serial bus interface device having a physical layer circuit capable of also simulating a plurality of devices without exerting an influence on a topology when the device is connected to a serial bus such as an IEEE 1394 serial bus. When a bus analyzer of the invention is inserted between a personal computer having the ID of 1 and a digital camera having the ID of 0 in order to analyze data on the IEEE 1394 serial bus to which the personal computer and the digital camera are connected, the bus analyzer interfaces with buses without being given an ID by the physical layer circuit, and analyzes the states of the buses without changing the state of the system to be analyzed and without changing the IDs of the personal computer and the digital camera.